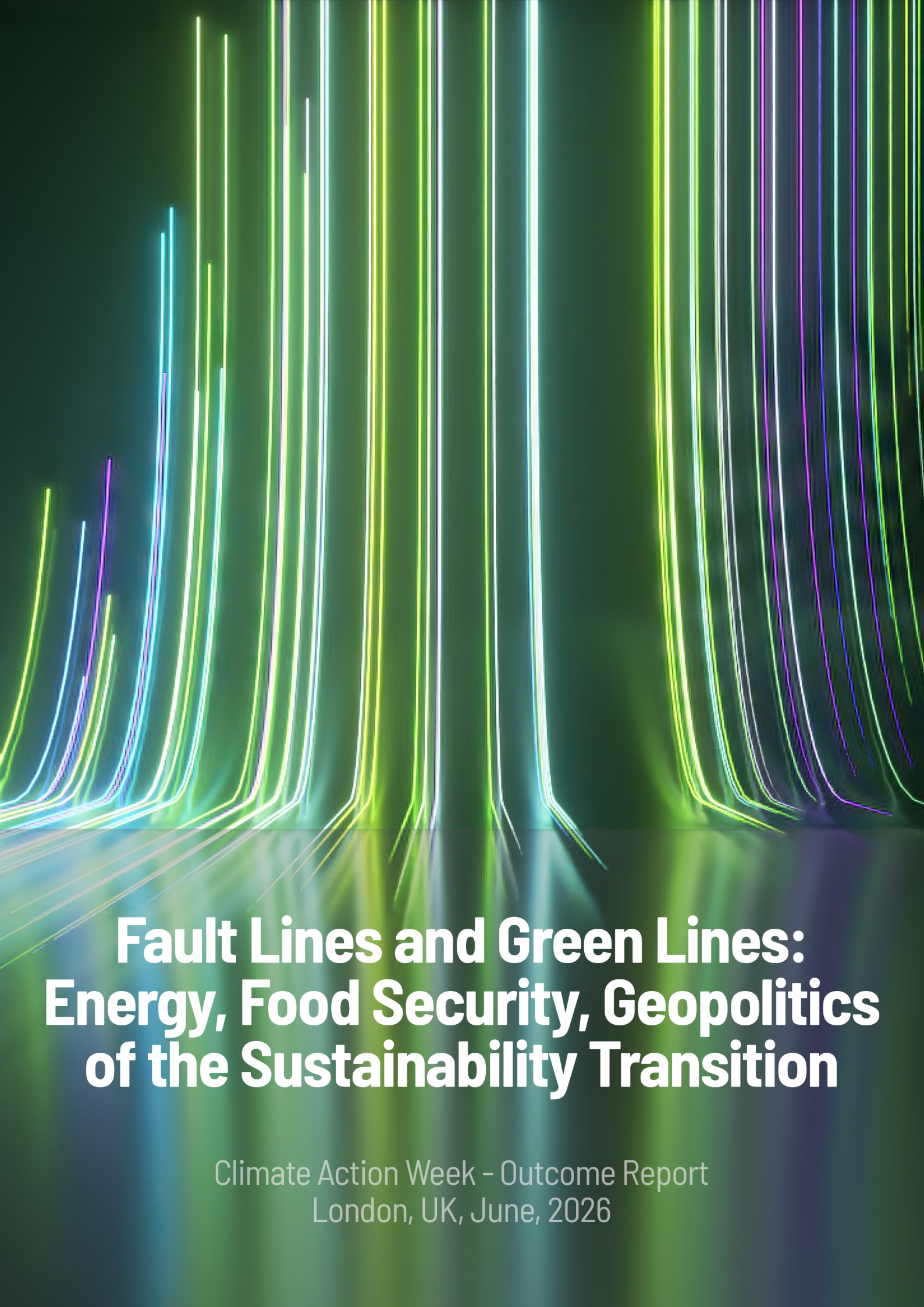

Fault Lines and Green Lines: Energy, Food Security, Geopolitics of the Sustainability Transition

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OUTCOME REPORT

Fault Lines and Green Lines: Energy, Food Security, and the Geopolitics of the Sustainability Transition

High-Level Roundtable | June 2026, London Climate Action Week

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PART 1

Background

The geopolitical order that once underpinned both the clean energy transition and global food security continues to fracture. The disruptions of 2026, including the recent interruption of traffic through the Strait of Hormuz and the tightening of sanctions and export-control regimes around energy and critical inputs, have confirmed what the past several years already suggested. Supply chains, once taken for granted, for energy, fertilizers, and agricultural commodities, are being redrawn. These pressures build on a cumulative sequence of shocks, from COVID to the war in Ukraine, that have intensified constraints year on year. Such shocks do not remain isolated. They force changes in sourcing, pricing, procurement, logistics, and contracts, with consequences that cascade across agricultural commodity markets and ultimately affect food availability and affordability.

The global context has changed, and with it the conditions under which decarbonization must now be financed and food systems sustained.

These two challenges are more structurally linked than climate discussions often recognize. Energy is not only a climate problem. It is an agricultural one. The nitrogen fertilizers on which global crop yields depend are largely derived from natural gas. Geopolitical disruptions, therefore, do not stay contained within energy markets. They travel, rapidly and predictably, into fertilizer supply chains, into food commodity prices, and into the food security of the countries least able to absorb the shock.

The economics of the energy transition, meanwhile, are moving faster than its politics. Renewables are scaling and new markets are emerging, but commitments that once appeared settled are being revisited under the combined pressure of higher financing costs, competition, and geopolitical recalibration. Capital is becoming more selective, more political, and more scarce.

Governments are now trying to advance climate, biodiversity, energy security, and food security objectives simultaneously, while multilateral cooperation is becoming harder and risk is more difficult for financial institutions to price.

Against this backdrop, IFA co-hosted a roundtable with the **European Bank for Reconstruction and Development (EBRD)** and **ERM** during London Climate Action Week. The objective was to examine where energy security, food security, and decarbonization have become inseparable, and to ask what durable strategies look like when the multilateral systems designed to manage these challenges are themselves under strain. The discussion placed less weight on whether sustainability remains the destination and more on what makes the transition operable, investable, and resilient under unstable conditions.

Participants

The exchange, moderated by IFA, brought together CEOs and senior representatives from ERM, EBRD, GAFTA, IPIECA, WRI FOLU, McDonald's Corporation, Sysco, Chatham House, FAIRR, the Carbon Trust, Unilever, Yara, and ICL.

PART 2

Discussion Outcomes & Observations

The discussion divided naturally into two halves. The first mapped the fault lines, the pressures now breaking the assumptions that food and energy systems were built on. The second traced the green lines, the pathways that participants judged capable of holding under those pressures.

The Fault Lines: Where pressure is building

Sustainability now has to be stress-tested

Participants described not a retreat from sustainability but a recalibration of how it is understood, evaluated, and pursued in a more contested political and economic context. Climate ambition is now tested against energy security, food affordability, geopolitical exposure, and industrial competitiveness. Transition plans that looked credible in a more stable policy and energy environment are being reassessed.

Sustainability is no longer a broad aspiration. It carries concrete material risks and operating assessments. Investors are asking less about whether a company has a narrative and a goal, and more about whether it understands its exposure to supply-chain disruption, farmer impacts, policy uncertainty, and long-term input dependency.

The implication is that decarbonization pathways must now prove their resilience. They have to remain commercially viable under volatile energy prices, disrupted shipping routes, changing demand, and more selective capital. This shifts the conversation from target-setting to stress-testing. It also widens the energy-security lens, because energy demand is still growing, including from AI and data centers, while the politics of the transition grow more contested. Stress-testing also surfaces real trade-offs: securing supply during a disruption can mean tolerating higher-carbon sourcing in the near term, so resilience and decarbonization do not always move in the same direction. No part of the value chain can manage these pressures alone.

Food security is becoming an input-security agenda

Participants stressed that fertilizer availability is a direct condition for agricultural output, yet the scale of that dependency is still insufficiently reflected in food-security and policy debates. Government concern centers on immediate shortages rather than on the risk that disrupted or unaffordable inputs could depress crop production across many regions over time.

The scale is not abstract. One calculation shared in the room estimated that the roughly 8 million tons of urea removed from the market during the recent period of disruption, if applied to wheat, would correspond to about 100 million tons of wheat, against global production of a little above 800 million tons. A significant share of globally traded urea was removed, and prices first spiked and then fell as demand destruction set in and normal buyers were priced out. About half the food the world eats depends on the Haber-Bosch process. One producer noted that its inputs alone help feed around 400 million people a day, close to 5 percent of the global population. These are the quantities at stake when inputs are disrupted.

Input disruptions can also have delayed effects. A shock may not show up immediately in food prices, but it can shape procurement, planting decisions, fertilizer use, yields, contract disputes, and future affordability. Food-security debates still too often begin at the point of food production while underestimating the upstream systems that make production possible. The full impact of the disruption of the Strait of Hormuz on food production is still not widely recognized. Fertilizers, natural gas, transport, and shipping are not peripheral to food security. They are part of its operating infrastructure.

The input-security agenda also needs to account for climate-related shocks. Energy prices, fertilizer costs, biofuel demand, and weather volatility interact, and a major climate shock could amplify already stressed commodity and input markets.

Two further gaps drew attention: The first concerns the sanctions regime. Food, feed, and fertilizer are sanctions-exempt, but the services required to trade them, such as laboratories that test grain for safety, are often not. This gap has entangled humanitarian shipments in red tape, including efforts to let the World Food Program buy Black Sea grain and ship it to Africa. The second concerns nutrition. Current systems are measured by how many people they feed, not by how they are fed. The question of calories versus nutrition and the health externalities of the current system remain largely outside the food-security conversation.

Resilience is real, but not yet rewarded

Resilience is moving from narrative to materiality. For investors, it relates to exposure, risk pricing, asset quality, and the credibility of transition plans. For input and food companies, it relates to supply continuity, supplier stability, procurement risk, and regulatory preparedness. For governments, it relates to food affordability and social stability. Several food-chain participants described resilience as the language through which sustainability is now translated internally, with supplier mapping, procurement flexibility, continuity of supply, and exposure to regional chokepoints treated as business-critical rather than ancillary.

Markets, however, do not yet consistently reward resilience. A company may invest in more secure, lower-carbon, or more diversified supply and still receive no consumer premium and no lower cost of capital. Consumers rarely pay a direct premium for sustainability claims on their own. Where sustainability does move sales, the effect tends to appear in volume rather than in a price premium, as the retail evidence discussed below suggests. Value may therefore have to be created through financing mechanisms, insurance, investor recognition, long-term contracts, and the ability to demonstrate reduced exposure to disruption. This is the gap that the pathways below try to close.

The Green Lines: What Can Work

Demand creation is the missing link

Many decarbonization technologies and practices are already known and deployable, among them low-carbon ammonia, carbon capture, efficiency improvements at production sites and in transport, enhanced-efficiency fertilizers, biologicals, and integrated soil-fertility and land-management practices. The barrier is less the availability of technology than the architecture

of demand. Uptake is constrained by affordability, unclear policy signals, and uncertainty over who captures or pays for the value created. Voluntary action alone is unlikely to build markets at the scale required.

Several questions remain unresolved at scale: who pays the premium, who signs the long-term contract, who verifies the environmental attribute, who carries the first-mover risk, and who aggregates demand across fragmented value chains. This places policy certainty and market design at the center of the transition. Existing pull mechanisms, support schemes, and low-carbon production incentives should be reviewed to understand what has worked, where costs have been shared effectively, and how similar approaches could be adapted for agricultural inputs.

The assumption that selling low-carbon products to consumers is dead, and that farmers will not invest, deserves qualification. Pockets of demand already exist. One participant cited data from a large retailer showing that products carrying a recognized climate badge sold on average about 10 percent more than equivalent products without it, an effect concentrated in higher-value goods rather than everyday consumables. On the farm side, growers of higher-value perennial crops such as macadamia and avocado, who need their plants to remain healthy for a decade or more, already invest in biologicals and soil health. These pockets on the consumer and farmer sides could be used to build momentum before scaling to the rest of the industry.

Claims credibility and attribute transfer are the next frontier

As sustainability moves deeper into procurement and investment decisions, the ability to verify and transfer environmental attributes becomes decisive. Product-level life-cycle assessments were discussed as a way to connect upstream improvements with downstream decarbonization roadmaps, while AI-enabled tools may help scale assessment and accounting. Investors, on the other hand, often assess company-level risk and disclosure rather than individual products, which makes the quality, comparability, and credibility of disclosure equally important.

This is not only a reporting issue. It is a market-formation issue. Without trusted data and claims frameworks, lower-carbon production struggles to command recognition, and customers struggle to justify their procurement decisions. Mass-balance approaches were identified as one route to transferring environmental attributes through complex value chains. The broader task is to make environmental performance legible enough for procurement teams, investors, and customers to act on.

The speed now achievable was illustrated by IFA's own work. IFA established a startup program two years ago and now hosts around 80 startups on its platform. At a hackathon held in Ireland shortly before the roundtable, one team built a full field-to-bread carbon footprint, covering every step, in just 36 hours. This shows how quickly measurement is advancing; the harder work of verification, comparability, and assurance, which is what actually makes a claim credible, remains the frontier.

Diversification is shifting from ideology to portfolio risk management

Interest in regenerative agriculture, biologicals, and soil health practices remains strong and is increasingly treated as part of portfolio diversification, as different tools can reduce risk, improve resilience and adaptation, and create optionality across regions and production systems. Participants emphasized that diversification is a way to reduce dependency, build local adaptability, and find context-specific combinations of mineral fertilizers, enhanced-efficiency products, biologicals, soil-health practices, and efficiency gains. This avoids unhelpful binaries between mineral fertilizers and alternatives. The relevant question is not which single model wins, but which combination delivers yield, resilience, affordability, emissions reduction, and economic value for the farmer in a given context.

Local context matters. Global sustainability strategies often have to be translated into very different production, sourcing, and affordability conditions, and the most promising opportunities may begin in specific crop segments, regions, or value-chain relationships before being scaled.

Trade is becoming a form of strategic optionality

Global commodity trade is often perceived as a vulnerability, but it is also a resilience mechanism. Fungible commodities and open markets allow sourcing to shift when a route, origin, or corridor is disrupted. Trade participants noted that disruption often creates indirect effects, as cargoes move to alternative origins, contracts are reconsidered, costs shift, and downstream markets adjust, with regulatory complexity adding a further layer of uncertainty.

In a fragmented geopolitical environment, the ability to keep options open is strategically valuable. Trade resilience belongs in climate and food-security planning rather than being treated as a separate commercial matter. Open, rules-based trade is therefore not only a question of efficiency but a form of insurance. When disruption hits, access to multiple origins, corridors, and suppliers can keep a localized shock from becoming a food-security crisis.

PART 3

Recommendations

The following recommendations translate the discussion into proposed action for companies, investors, financial institutions, and policymakers. Participants repeatedly returned to four enabling conditions that cut across all of them: policy and regulatory certainty; financing mechanisms that price resilience; data, traceability, and claims frameworks that make environmental attributes credible; and deeper collaboration across the food-energy-fertilizer value chain.

1. Evaluate transition plans against geopolitical and food-security shocks.

Sustainability strategies should include geopolitical and food-security stress tests. Companies and investors should assess whether their pathways remain credible under scenarios of

market disruption, supply pressure, political or trade-route instability, and affordability constraints.

2. Make resilience a rewarded attribute in finance, insurance, and procurement.
Finance, insurance, procurement, and policy frameworks should recognize resilience as a value-creating attribute. This could include resilience-linked financing, insurance benefits, long-term offtake agreements, procurement recognition, and investor metrics that reward reduced exposure to systemic disruption.

3. Create demand signals for low-carbon fertilizers.
Policymakers can reduce the early-market uncertainty that holds back investment in low-carbon fertilizers by creating clearer enabling frameworks. These could include public procurement criteria, recognition of certified low-carbon inputs in climate and food-security policies, support for credible certification and mass-balance systems, and incentives for food companies and farmers to adopt lower-carbon inputs. Development banks, food companies, and fertilizer producers can complement this with advanced market commitments, long-term offtake agreements, and finance structures that share early-stage costs across the value chain.

4. Build credible systems for environmental attributes, claims, and carbon-market readiness.
Fertilizer producers, investors, certification bodies, and policymakers should work toward credible systems that allow the environmental attributes of low-carbon fertilizers and enhanced-efficiency products to be tracked, verified, and recognized throughout the agri-food value chain. Such systems can support procurement and investment decisions, strengthen Scope 3 emissions-reduction goals, and help determine where carbon-market mechanisms or other results-based finance models may be appropriate. The priority is to build confidence that emissions reductions and other sustainability benefits are robust, verifiable, and go beyond compliance reporting.

5. Manage diversification as a context-specific resilience portfolio.
Diversification can manage risk by broadening the tools available to farmers and food systems. Fertilizers, enhanced-efficiency products, biologicals, regenerative practices, and precision agriculture should be evaluated as complementary options that respond to local agronomic conditions, affordability, infrastructure, and resilience needs.

6. Protect open trade as resilience infrastructure.
International cooperation should protect open, rules-based trade in food, fertilizers, energy, and other critical agricultural inputs. In a more volatile geopolitical environment, trade openness is a core part of food-system resilience, not only a question of efficiency. At the same time, the chokepoint exposure that makes open trade valuable also argues for strategic redundancy, including diversified and, where viable, regional or domestic production, so that openness and supply security are pursued together rather than as substitutes. Governments and international institutions should work to avoid export restrictions, keep essential inputs moving during crises, and strengthen coordination on trade, logistics, and supply-chain transparency.

7. Join up governments and bring health into the food-security conversation.
Participants noted that climate, agriculture, energy, trade, and finance decisions are still often made in separate ministries, and that public health is largely absent from the food-security discussion. Governments should coordinate across these functions so that subsidies and regulations do not pull against one another, and should widen the goal from the quantity of calories produced to the quality and nutritional value of the food that reaches people.

PART 4

The Road to COP31

Connect climate ambition with food-system resilience.

The roundtable pointed to a clear challenge for the period ahead. Food systems cannot be addressed through the lenses of emissions, adaptation, diets, or nature alone. They also have to be understood in light of the conditions that enable climate action and a credible green transition to move forward: reliable access to inputs for farmers, manageable supply-chain risk for companies, credible demand for lower-carbon products, financial systems that account for resilience and transition risk, open trade routes, and trusted sustainability claims.

Participants identified several building blocks for a more grounded agenda, including policy frameworks that provide greater certainty; consistent support for transition technologies such as carbon capture and lower-carbon ammonia; stronger mechanisms for valuing resilience; better data and traceability standards; and closer alignment among investors, governments, industry, and food-system actors.

Artificial intelligence is likely to be one of the forces that shape how quickly this agenda can advance. The roundtable saw a concrete example, a field-to-bread carbon footprint produced in 36 hours, and participants expected AI-enabled tools to lower the cost of measurement, verification, and claims across fragmented value chains. Used well, these tools could help resolve some of the demand-creation and attribute-transfer problems that hold the transition back today.

This is where the food-energy-fertilizer nexus can contribute to the climate and food-security conversation on the road to COP31. The COP is an opportunity to make the links between energy, finance, trade, technology, and agriculture more visible, and to show how they shape the ability of food systems to stay productive, affordable, and resilient while contributing to a transition that also advances lower-carbon and nature-related outcomes.